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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/031,950	01/25/2002	Bryan Greener	P07504US00/BAS	8762
881	7590	05/05/2004	EXAMINER	
STITES & HARBISON PLLC 1199 NORTH FAIRFAX STREET SUITE 900 ALEXANDRIA, VA 22314			ZUCKER, PAUL A	
			ART UNIT	PAPER NUMBER
			1621	

DATE MAILED: 05/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/031,950

**Applicant(s)**

GREENER, BRYAN

**Examiner**

Paul A. Zucker

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 28 January 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 16-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 16-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>8/14/2003</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Current Status***

1. This action is responsive to Applicants' amendment filed 28 January 2004.
2. Receipt and entry of Applicants' amendment is acknowledged.
3. Applicant's cancellation of claims 1-15 is acknowledged.
4. Applicant's addition of new 16-23 is acknowledged.
5. Claims 16-23 remain pending.
6. The objections to the specification set forth in paragraphs 2-4 of the previous Office Action mailed 20 June 2003 are withdrawn in response to Applicant's amendment.
7. The objections to the claims set forth in paragraph 5 of the previous Office Action mailed 20 June 2003 are withdrawn as moot in view of Applicants' cancellation of all original claims.
8. The rejections under 35 USC § 112, 1<sup>st</sup> and 2<sup>nd</sup> paragraphs, set forth in paragraphs 6 - 8 of the previous Office Action mailed 20 June 2003 are withdrawn as moot in view of Applicants' cancellation of all original claims.
9. The rejection under 35 USC § 102 set forth in paragraphs 9 - 12 of the previous Office Action mailed 20 June 2003 are withdrawn as moot in view of Applicants' cancellation of all original claims.
10. The rejection under 35 USC § 103 set forth in paragraph 13 of the previous Office Action mailed 20 June 2003 is withdrawn as moot in view of Applicants' cancellation of all original claims.

***New Rejections and Objections***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

***Claim Rejections - 35 USC § 112***

11. Claim 18 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 18 recites the limitation "2,2-dihydroxybenzoic acid" in line 2. This does not represent a real compound since the valence of the carbon at the 2 position of the aromatic ring is violated. Claim 18 is therefore rendered indefinite.

***Claim Rejections - 35 USC § 102***

12. Claims 16-22 are finally rejected under 35 U.S.C. 102(b) as being anticipated by Wilson (Liquid Crystals, Novel Fluorocarbon Side-chain Polyesters based on 3, 5-Dihydroxybenzoic Acid, 1995, 18(2), pages 347-350). Wilson discloses (Page 347, column 1, lines 1-23) oligomers formed from the reaction of fluoroalkylesters of 3, 5-dihydroxybenzoic acid and alkyl diacids of the instant general formula wherein m = 6, 12 (dodecanedioic) or 20. These compounds possess a phenyl core having five hydrogen-bond accepting sites (oxygen atoms). The Examiner interprets claim 18, which is indefinite for the reasons set forth above, to encompass 3,5-dihydroxybenzoic acid. Wilson discloses (Page 348, column 1, lines 5-8) melt solidified materials which meet the limitations of a supramolecular assembly and artifact comprising the oligomers. Wilson therefore anticipates claims 16-22.

***Claim Rejections - 35 USC § 103***

13. Claims 16-23 are finally rejected under 35 U.S.C. 103(a) as being unpatentable over Wilson (Liquid Crystals, Novel Fluorocarbon Side-chain Polyesters based on 3, 5-Dihydroxybenzoic Acid, 1995, 18(2), pages 347-350) in view of Ward et al (US 5,665,297 09-1997).

Instantly claimed is a compound that is capable of being hydrogen bonded to form a supramolecular assembly having the general formula (I) and a melt extruded artifact formed therefrom.

Wilson teaches (Page 347, column 1, lines 1-23) oligomers formed from the reaction of fluoroalkylesters of 3, 5-dihydroxybenzoic acid and alkyl diacids of the instant general formula wherein  $m = 6, 12$  (dodecanedioic) or 20. These compounds possess a phenyl core having five hydrogen-bond accepting sites (oxygen atoms). The Examiner interprets claim 18, which is indefinite for the reasons set forth above, to encompass 3,5-dihydroxybenzoic acid. Wilson teaches (Page 348, column 1, lines 5-8) melt solidified materials which meet the limitations of a supramolecular assembly and artifact comprising the oligomers.

The difference between the instantly claimed invention and that taught by Wilson is that Wilson does not appear to contemplate the further processing of the oligomers formed into useful articles (artifacts) through melt extrusion.

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Ward, however, teaches (Column 2, lines 10-52) a process for producing tubular polymer workpieces that may involve melt extrusion. Ward further teaches (Column 3, lines 54-67) the preferred use of polymers formed from dihydroxybenzoic acid.

One of ordinary skill in the art would have been motivated to form usable articles from the oligomeric materials of Wilson by melt extrusion of the oligomers as taught by Ward in order to produce useful articles. The teaching of the preferred use of dihydroxybenzoic acid-containing polymers by Ward would have further motivated one of ordinary skill to combine the two teachings with a reasonable expectation for success.

Thus the instantly claimed compounds and methods would have been obvious to one of ordinary skill in the art.

### ***Conclusion***

14. Claims 16-23 are pending. Claims 16-23 are finally rejected.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

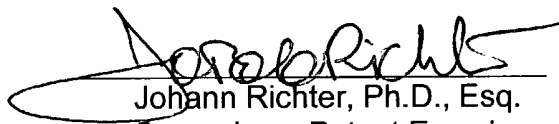
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul A. Zucker whose telephone number is 571-272-0650. The examiner can normally be reached on Monday-Friday 7:00-3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Johann R. Richter can be reached on 571-272-0646. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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